

## CLAIMS

1. Method for ejecting liquid or pasty products, in particular for spraying liquid products by means of a pressurized gas, consisting of preparing the product in the form of a refill in a disposable packaging with flexible covering, surrounding this latter, around an ejecting nozzle, in a sealing manner with an inextensible volume and injecting into this latter the pressurized gas for compressing said flexible covering for the purpose of having it eject its content.
2. A device for ejecting a liquid or pasty product, in particular for spraying liquid products, by means of a pressurized gas, characterized by the functional combination of three separate constituents: on one side, by a refill of product to be ejected, prepared in a disposable package with flexible covering (2) in particular of a sheet of plastic material, on the other side by a connecting body for permanent use (7, 8, 12, 13 or 7a, 8a, 12a, 13a), comprising an inextensible volume (7 or 7a), able to contain said disposable packaging and arranged to be sealingly connected to the flexible covering (2) around an ejecting nozzle, and finally by a capsule with pressurized gas (1), known per se, said connecting body further comprising means (13, 14, 17, 11) for sealingly connecting the capsule with pressurized gas (1) to said inextensible volume (7) and for injecting therein the pressurized gas for the purpose of compressing the flexible covering (2) and ejecting its content through said nozzle (at 5).
3. A device according to claim 1, characterized in that the flexible covering (2) of the disposable packaging is connected to a rigid, tubular tip (3) with external thread (at 4), to be screwed, with interposition of a sealing joint (10) into a hole with corresponding screw thread through which the inextensible volume (7, 8 or 7a, 8a) of the connecting body is in communication with the outside.
4. A device according to claim 3, characterized in that the inextensible volume of the connecting body consists of a rigid cylinder (7 or 7a), closed at one of its extremities by a removable side (8 or 8a), coaxially pierced with a threaded hole provided for sealingly connecting the rigid, tubular tip (3) threaded at (4) of the disposable packaging.
5. A device according to any one of claims 1 – 4, characterized in that, for receiving the capsule (1) of pressurized gas, the connecting body comprises a rigid cylinder (12 or 12a), which is in communication (at 11 or 11a) with the non-extensible volume (7 or 7a), and of which one (13) of the two sides is detachable through screwing for introducing the gas capsule (1), while the same side or the opposed side bears a projecting point (17), against which the capsule (1) is pressed to be opened and to have the gas escape to the inextensible volume (7 or 7a).
6. A device according to claim 5, characterized in that the detachable side (13) that can be screwed completely on the cylinder (12 or 12a) over the gas capsule (1) without causing it to open, is coaxially pierced with a threaded hole in which is screwed a tightening screw (15) having, owing to a joint 16, a sealing

rotation, and which screw allows the capsule (1) and its opening point (17) to be pushed in from the outside, one on top of the other.

7. A device according to any one of claims 1 – 6, characterized in that it comprises means (19 – 22) for applying atmospheric pressure to the cylinder (12 or 12a) containing the capsule (1) with pressurized gas, the means being automatically controlled through an operation necessarily effected before the threaded end (13 or 13a) of the cylinder (12 or 12a) is detached.

8. A device according to claims 6 and 7, characterized in that in the side (13) of the receiving cylinder (12 or 12a) of the gas capsule (1) is provided with a compression spring (21) able to press the capsule back when its tightening screw (15) is loosened, and allowing it to push in, by its opposing extremity, the opening button (20) of a degassing valve (18) mounted in the removable, threaded side (13) of the cylinder (12 or 12a).

9. A device according to any one of claims 1 – 8, characterized in that the disposable packaging with flexible covering (2) comprises an ejecting nozzle (5) on a rigid tip (3) which traverses a rigid wall (8 or 8a) of the inextensible volume (7 or 7a) of the connecting body, and which projects from this wall with a control button (6) of a valve of the aerosol type, controlling the outlet of said nozzle (5).

10. A device according to claim 9, characterized in that the rigid connecting body has the form of a paint gun (Fig. 3) whose butt (12a) forms the receiving cylinder of the capsule (1) with pressurized gas, and whose trigger (22) forms one of the arms of a lever bent at an angle, whose other arm (24) rests on the opening button (6) of the control valve of the refill with flexible covering (2).

March 17, 2006

J. A. Groeneveld

*J. A. Groeneveld*